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Actions to be taken for improving functional prognosis in dementia

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Dear editor:

The growing incidence of dementia has led to an increased need for specialized care and higher health and social costs. Functional decline is the main cause of dementia complications. Per definition, dementia diagnosis and severity stratification require a certain degree of functional impairment [1]. Therefore, it is important to determine strategies to prevent functional deterioration in both, general population and especially people with dementia.

The number of older adults with some degree of disability will triple by 2050 due to the increase in the aging population and the prevalence of age-related diseases that lead to functional impairment [2]. Therefore, functional impairment and disability in old people are increasingly becoming a major public health concern. Furthermore, functional impairment severely impairs quality of life and consumes a large proportion of the public health resources, creating an important burden for health care systems.

It is well known that functional loss and disability in dementia are the main consequences of cognitive decline. Therefore, most of the efforts in dementia management have been directed to stop or reverse cognitive decline. However, functional loss and disability are also the consequence of other conditions that are common in old age and comorbid with dementia, such as frailty, sarcopenia, malnutrition, falls, pulmonary or cardiovascular diseases, polypharmacy, depression, and neuropsychiatric symptoms (NPS) [3]. See Fig. 1.

In previous research by our group, it has been shown that several factors, in addition to cognitive impairment, have an important role in the functional prognosis of those newly diagnosed with dementia. The load of NPS, measured with the Neuropsychiatric Inventory (NPI), significantly altered the course of the functional decline over 5 years. The higher score in the NPI reflected a faster functional loss. [4] Malnutrition in addition not only was a factor that increased functional loss during disease progression but also was associated with higher mortality [5]. Polypharmacy is well known as a geriatric syndrome that is frequent in old age and even more in dementia, we evidenced that the number of medications consumed by these population was directly correlated with functional decline [6]. Finally, we documented that the prescription of benzodiazepines was frequent and increased with dementia progression and that alone or in combination with antidepressants increased the functional loss [7].

Other authors have reported similar results and the influence of other factors such as pain, depression, body mass index, and social issues [8].

In the previously mentioned studies, we especially focused on Dementia with Lewy bodies (DLB) and Alzheimer's Disease (AD) because they are the two most common neurodegenerative dementias. It is of relevance that people diagnosed with DLB compared with those with AD had more pronounced functional impairment during the whole disease trajectory and were more affected by NPS, frailty, motor disturbances, comorbidities, and polypharmacy [4]. This may be also the case for other non-degenerative dementias where the physical component tends to be greater.

Maintaining functional capacity, avoiding complications, and preserving the quality of life are objectives that should be retained from diagnosis to very advanced stages. This may differ from other goals that lose importance at more severe stages.

So far, we can say that there are a lot of co-morbid factors that affect the functional prognosis and therefore the general prognosis of people living with dementia. Hence, intervening on these has the potential to improve prognosis and quality of life.

For example, NPS should be more systematically addressed, not only when aggression or hallucinations are involved; usually, depression, apathy, anorexia, or anxiety are symptoms that go unnoticed. Avoiding inappropriate medication and polypharmacy following person-centered treatment objectives should be standard. Malnutrition on the other hand is a multi-causal entity, conditions such as dysphagia, loss of taste, poor oral health, depression, or anorexia are common causes that should be identified and managed. Dementia and other comorbidities are promotors of an active catabolic status that must be compensated [9]. Falls, frailty, and sarcopenia for example are frequent in people with dementia and correspond to important contributors of functional loss. These conditions can be intervened with simple, accessible, and cost-effective measures such as physical activity, exercise, and nutritional guidance and supplementation [10].

Dementia management not only should be multidisciplinary; physicians from all specialties related to dementia (general practice, neurology, psychiatry, internal medicine, geriatrics) must be aware that cognition is not the single factor that determines prognosis, and there are several actions and interventions in other areas with the potential to

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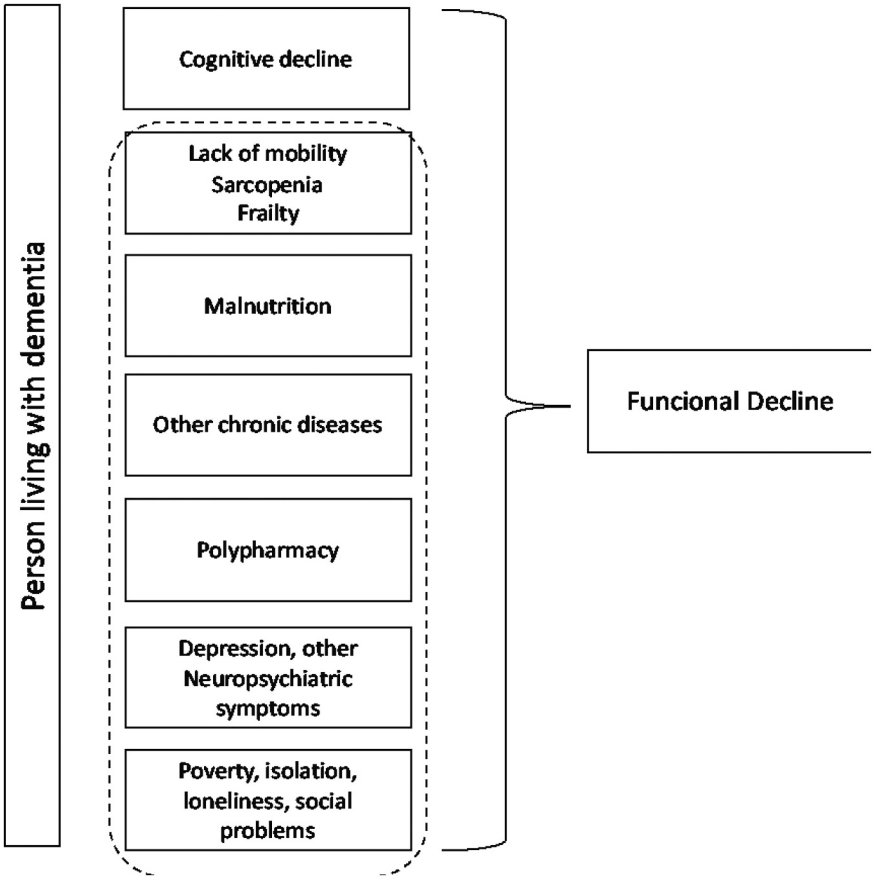

Fig. 1. Contributors of functional loss and disability in people living with dementia.
The dotted line surrounds the conditions that also lead to functional deterioration and are susceptible to effective interventions.

reduce functional loss, complications and improve the quality of life of those living with dementia.

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